



**SHERWIN
WILLIAMS.**

Chemical Coatings

CC-D21

POLANE® T60 Polyurethane Enamel

Carbide Black F63B91
Blending White F63W93
Blending Clear F63F94

Flattig Clear F63T10
Catalyst V66V90

<u>DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>
<p>POLANE® T60 Polyurethane Enamel is a low gloss two component polyurethane coating meeting the 2.5 to 2.8 VOC EPA regulations and the high performance properties required by the electronic enclosure markets. Polane® T60 coatings may be applied as low gloss, smooth or textured systems on metal and structural foam and injection molded plastics such as , polycarbonate, ABS, polystyrene and SMC.</p>	<p>Gloss: 15-20 units force dry at 2.0 mils dft. Air dry gloss is slightly higher.</p> <p>Volume Solids: as packaged 63 ± 2% catalyst 72.6% catalyzed & reduced 58-59%</p> <p>Weight Solids: 81 ± 1%</p> <p>Viscosity: as packaged 70-90 Krebs Units catalyzed and reduced 12-18" Zahn #3</p> <p>Recommended film thickness: Mils Wet 2.5 - 3.4 Mils Dry 1.5 - 2.0</p> <p>Spreading Rate (no application loss) @ 1.5-2.0 mil dft: 465-630 sq ft/gal catalyzed and reduced</p> <p>Drying (77°F, 50% RH): To Touch: 30-40 minutes To Handle: 1-3 hours To Recoat: no critical recoat To Pack: overnight</p> <p>Spatter or texture coat may be applied immediately after a 15 minute flash off of smooth coat. Force Dry: 30-45 minutes at 140-180°F after a 15 minute flash off time Temperatures above 140°F may yield slightly lower gloss. Binks Infratherm oven gives much faster cure.</p> <p>Flash Point: 60°F Pinsky-Martens Closed Cup</p> <p>Mixing Ratio #1- 2.8 lbs./gal/ VOC: 5 parts Polane T60 1 part V66V90 Catalyst 0.5 part (8%) R7K84 Reducer</p> <p>Mixing Ratio #2- 2.5 lbs./gal/ VOC: 5 parts Polane T60 1 part V66V90 Catalyst 0.5 part (8%) R6K9, Acetone or Oxsol 100</p> <p>Pot Life: 2 hours @ 77°F Less reduction or higher temperature will shorten pot life.</p> <p>Package Life: 1 year, unopened</p> <p>Air Quality Data: Photochemically reactive Volatile Organic Compounds (VOC) as packaged, maximum 2.6 lb/gal, 312 g/L catalyzed and reduced as in #1, maximum 2.8 lb/gal, 336 g/L catalyzed and reduced as in #2, maximum 2.5 lb/gal, 300 g/L</p>	<p>General: Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, any contamination, and surface passivation treatments to ensure optimum adhesion and coating performance properties. Consult Metal Preparation Brochure CC-T1 for additional details.</p> <p>Aluminum (untreated): Prime with Industrial Wash Primer, P60G2, or Kem Aqua® Wash Primer, E61G520.</p> <p>Galvanized Steel (untreated): Prime with Industrial Wash Primer, P60G2, or Kem Aqua® Wash Primer, E61G520.</p> <p>Steel or Iron (untreated): Use Industrial Wash Primer P60G2, Kem Aqua® Wash Primer E61G520 or Polane® Plus SprayFil or Sealer.</p> <p>Plastic: Due to the diverse nature of plastic substrates, a coating or coating system must be tested for acceptable adhesion to the substrate prior to use in production. Reground and recycled plastics along with various fire retardants, flowing agents, mold release agents, and foaming/blowing agents will affect coating adhesion. A filler or primer/barrier coat may be required. Please consult your Sherwin-Williams Chemical Coatings Sales Representative for system recommendations.</p> <p>Wood (interior only): Must be clean, dry, and finish sanded. Use Polane® 2.8 Plus Filler D61H75 and sand or self-seal.</p>
<p>Advantages:</p> <ul style="list-style-type: none"> • Meets EPA requirements of 2.8 lb/gal VOC catalyzed and reduced at application • The use of exempt solvents for reduction yields application VOCs of less than 2.5 lbs./gal. • Direct adhesion to a wide range of plastic substrates (See Plastic under specification column). • Excellent physical and chemical properties required by the business machine/electronic cabinetry market • Excellent hardness, adhesion and abrasion resistance • High volume solids and spreading rate with good filling and build • Air drying or force drying - a low energy cure system • Application versatile - may be applied with a wide array of application equipment. Plural component equipment not required • Full range of custom colors available through colorant system • Does not contain 1,1,1-Trichloroethane • Easier to apply with consistent gloss and sheen than other 2.8 VOC low gloss polyurethanes • Passes HP-UV test commonly used in business machine market • Free of lead and chromate hazards 		<p>Testing: Due to the wide variety of substrates, surface preparation methods, application methods, and environments, the customer should test the complete system for adhesion and compatibility prior to full scale application.</p>
		<p>An Environmental Data Sheet is available from your local Sherwin-Williams facility.</p>

APPLICATION

Typical Setups

Reduction: Polane® Reducer R7K94 may be used for slightly faster flash off. For better flow, Polane® Retarder R7K216, MAK R6K30, or Cyclohexanone R6K32 may partially replace the other reducers. **Note:** Maximum total reduction is 8% by volume to meet 2.8 lb/gal VOC.

May be reduced with exempt solvents, R6K9, Acetone or Oxsol 100, 8 - 10% by volume to meet 2.5 lb/gal VOC.

Smooth coat can be applied with Conventional Spray, HVLP or Electrostatic spray equipment. A pressure pot is required for the texture coat.

Conventional Spray:

Air Pressure 30-40 psi
Fluid Pressure 8-12 psi

Texture: Allow 15 minutes flash off before texturing. For texture coating applications over smooth basecoat, use same catalyzed and reduced material. The lower the atomizing pressure, the larger the texture pattern. The profile of the texture pattern can be controlled by adjusting the pot and atomizing pressure of the texture coat.

Cleanup:

Clean tools/equipment immediately after use with a Polane Reducer, MEK or MAK. Follow manufacturer's safety recommendations when using any solvent.

SPECIFICATIONS

Performance Tests

Substrate: Bonderite 1000 steel panels at 1.8 mils DFT after 30 minutes at 150°F force dry and 14 days air drying.

Salt Spray Test

ASTM B117 100 hours - Excellent
1/8" rust creepage on scribe maximum

Humidity

ASTM D2247, 100°F, 100% RH Pass 500 hours
Impact Resistance, Direct

ASTM D2794 80 in lb
Impact Resistance, Reverse

ASTM D2794 30 in lb
Pencil Hardness

ASTM D3363 2H
Adhesion Excellent

Taber Abrasion, ASTM D4060

CS 17 wheel, 1000 g, 1000 cycles <100 mg
Dry Heat Resistance

ASTM D2485 250°F
HP/UV

ASTM D4674 Excellent

Stain Resistance

After ½ hour spot test:

Coffee Excellent

Vaseline Excellent

Coca Cola Excellent

Catsup Excellent

Lipstick Excellent

SPECIFICATIONS

Product Limitations:

- Polane® T60 coating must be catalyzed at 5:1 ratio with V66V90 by volume.
- Polane® Catalyst V66V90 is recommended for interior use only. Polane® T60 is not recommended for extended exterior exposure because of chalking and loss of gloss even with exterior catalyst.
- Do not use Polane® Plus Catalyst V66V44.
- Keep containers closed at all times to minimize solvent evaporation and higher viscosity. Polane® T60 solvents evaporate very fast.
- Do not spray hot. Heat shortens pot life. Do not pump catalyzed material from drums into circulation system. Friction heat developed by pumps and circulation will shorten pot life.
- Dip, flowcoat and brushing are not recommended.
- DO NOT VARY CATALYST RATIO. The catalyst ratio has been established for optimum hardness, flexibility, gloss and chemical and solvent resistance.
- Curing temperature must not exceed the heat distortion temperature of the plastic substrate.
- Protect Polane® coatings, catalyst and reducer from moisture as water affects pot life and film properties. Store indoors.
- Do not package Polane® coated products in airtight plastic bags unless completely cured. Since Polane® coatings continue to cure for several weeks the buildup of organic solvents and reaction by-products could cause improper cure and adhesion failure in use.
- Do not blend with any other polyurethane quality. No other catalysts, colorants or reducers are recommended because foreign materials such as alcohols, glycols and lacquer thinners affect film performance properties.
- Reduction beyond 8% exceeds 2.8 lb/gal VOC with nonexempt solvents.
- If recoating after more than 7 days cure, sand lightly to insure intercoat adhesion.
- Air drying may yield slightly higher gloss than force drying.
- For applications involving a smooth finish, gloss will vary slightly with film thickness changes and length of flash off time.

Chemical Resistance

After ½ hour spot test and one hour recovery:

Isopropanol Excellent

10% NaOH Excellent

Ethyl Acetate Excellent

Toluene Excellent

5% Tide Solution Excellent

Ammonia Excellent

Drano® Excellent

Clorox Formula 409 Excellent

MEK Excellent

10% HCl Excellent

1N H₂SO₄ Excellent

(MEK 50 rubs None - slight burnish)

CAUTIONS

FOR INDUSTRIAL SHOP APPLICATION

Thoroughly review product label and Material Safety Data Sheet (MSDS) for safety and cautions prior to using this product.

A Material Safety Data Sheet is available from your local Sherwin-Williams facility.

Please direct any questions or comments to your local Sherwin-Williams facility.

Catalyst CONTAINS ISOCYANATES. People who have chronic (long-term) lung or breathing problems or have had a reaction to isocyanates, must not be in the area where this product is being applied. Where overspray is present, a positive pressure air-supplied respirator should be worn. If unavailable, a properly fitted organic vapor/particulate respirator may be effective. Consult catalyst MSDS and product label for complete handling instructions.

Note: Product Data Sheets are periodically updated to reflect new information relating to the product. It is important that the customer obtain the most recent Product Data Sheet for the product being used. The information, rating, and opinions stated here pertain to the material currently offered and represent the results of tests believed to be reliable. However, due to variations in customer handling and methods of application which are not known or under our control, The Sherwin-Williams company cannot make any warranties as to the end result.